CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 85-108

WASTE DISCHARGE REQUIREMENTS
(SITE CLEANUP REQUIREMENTS) FOR:

JONES CHEMICALS, INC.
MILPITAS FACILITY
MILPITAS
SANTA CLARA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter called the Board) finds that:

1. Jones Chemicals, Inc. (hereinafter called the discharger) operates a chemical storage and distribution facility located at 985 Montague Expressway, between Routes 17 and 680, in the City of Milpitas, Santa Clara County.

2. The discharger receives chlorine gas, sulfur dioxide, anhydrous ammonia, various acids and bases and trichlorethane by rail or tank truck and repackages these chemicals into cylinders or drums. The discharger also manufactures sodium hypochlorite and aqua-ammonia and ships these chemicals in tank trucks or drums.

3. Waste waters generated by a drum rinsing operation are neutralized and discharged to the municipal sanitary sewer system. Sanitary wastes also are discharged to the sewer system.

4. Subsurface investigation by the discharger shows that groundwaters beneath the site and beyond the site boundaries have been contaminated by organic solvents, such as trichloroethylene (TCE), 1,1,1-trichloroethane (TCA), and perchloroethylene (PCE). The apparent cause of said contamination was an explosion of a solvent tank that resulted in discharge of as much as 4000 gallons of organic solvents to the ground and to adjacent Berryessa Creek.

5. As of April 1985, the solvent contamination extended horizontally a distance of approximately 1200 feet downgradient beyond the property boundary and vertically to a depth of 115 feet. Chemicals such as trichloroethene and trichloroethane, which are EPA priority pollutants, have been detected in groundwater samples at concentrations exceeding 200,000 parts per billion.

6. The groundwater pollution from the facility is of particular concern because of the high toxicity and high concentrations of chemicals, and because of the potential for the continued migration of pollutants to usable groundwaters. Wells within the vicinity of the site draw water for municipal supply from depths of approximately 200 feet or greater.

7. In the fall of 1984, the discharger began interim extraction of polluted groundwaters from within the site boundaries in an attempt to contain and clean up the areas of highest contamination. Currently there is between 15,000 to 25,000 gallons per day of polluted groundwater which is extracted and treated by airstripping and carbon adsorption, followed by discharge to Berryessa Creek.

8. Further investigative and remedial action is necessary to prevent the continued migration of pollutants to unaffected groundwaters in a manner which could adversely affect existing and potential beneficial uses.

9. The Regional Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on July 21, 1982. The Basin Plan contains water quality objectives for groundwater.

10. The existing and potential beneficial uses of the groundwater underlying the facility include:

    a. Municipal Water Supply
    b. Domestic Water Supply
    c. Agricultural Water Supply
    d. Industrial Service and Process Water Supply

11. The Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirements and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

12. This project constitutes a minor modification to land and such activity is thereby exempt from the provisions of the California Environmental Quality Act (CEQA) in accordance with Section 15304 of the Resources Agency Guidelines.

13. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, that Jones Chemicals, Milpitas Facility, Milpitas, in order to meet the provisions contained in Division 7 of the California Water Code and the regulations adopted thereunder, shall comply with the following:

A. Prohibitions

1. The discharge of waste or hazardous materials in a manner which will degrade the water quality or adversely affect beneficial uses of the groundwaters of the State is prohibited.

2. Further migration of pollutants through surface runoff or subsurface transport to usable groundwaters or surface waters is prohibited.

3. Methods employed to investigate, contain, and/or clean up the polluted groundwaters shall not cause the spread of pollution in an adverse manner.

B. Specifications

1. The treatment or disposal of waste shall not create a nuisance as defined in Section 13050(m) of the California Water Code.

2. The discharger shall conduct monitoring activities as needed to define the current local hydrogeologic conditions, and the lateral and vertical extent of soil and groundwater pollution in and contiguous to the zone of known pollution. Should monitoring results show evidence of plume migration, additional plume characterization shall be required.

C. Provisions

1. The discharger shall submit to the Board technical reports on self-monitoring work performed according to a program approved by the Executive Officer.

2. The discharger shall comply with Prohibition A.3 and Specification B.2 in accordance with the following task and time schedule:

Task	Completion Date
Submit a technical report acceptable to the Executive Officer which defines the vertical distribution of pollutants below the 35 foot depth and verifies the assumption that the upper 65 feet of water bearing sediments act as a single hydrogeologic unit	October 1, 1985

3. The discharger shall comply with Prohibitions A.1, A.2, and A.3, and Specification B.1 above, by pursuing cleanup actions according to the following schedule:

Task	Completion Date
a. Submit a proposal acceptable to the Executive Officer for additional remedial measures to contain and clean up the pollutant plume. The proposal should address the following specific areas of concern:	October 22, 1985

(1) Interception of groundwater at the downgradient, peripheral boundary of the plume west of Berryessa Creek.

(2) Containment aand cleanup of groundwater in the areas of high pollutant concentration west of, and adjacent to, Berryessa Creek, near wells B-24, B-34.

(3) Additional extraction wells east of Berryessa Creek, and north of well B-29, to more effectively contain and cleanup the on site portion of the pollutant plume.

b. Submit a technical report acceptable to the Executive Officer describing the proposed design of the treatment system for extracted groundwaters west of Berryessa Creek.	October 22, 1985
c. Complete the installation of additional extraction wells, or other necessary hydraulic control structures, to contain and clean up both the onsite and offsite portions of the pollutant plume.	December 22, 1985
d. Complete the installation of additional treatment facilities as necessary, capable of reducing concentrations of organic pollutants in extracted groundwaters to acceptable levels prior to discharge to waters of the State.	December 22, 1985
e. Commence containment and cleanup of both the onsite and offsite portions of the pollutant plume.	January 22, 1986
f. Submit a technical report acceptable to the Executive Officer which describes the work completed to accomplish the tasks described in Provision C.3.c and C.3.d, and which describes measures taken and proposed to be taken to evaluate and monitor the adequacy of the system to contain and clean up the polluted groundwaters.	January 22, 1986
g. Submit a technical report acceptable to the Executive Officer which evaluates the effectiveness of the extraction system, and/or other hydraulic control structures, necessary to control and clean up the polluted groundwaters.	April 22, 1985

The report shall demonstrate the adequacy of the system to contain the pollutant plume and to achieve the efficient removal of pollutants from the subsurface environment. Such an evaluation shall include, but need not be limited to, an estimation of the flow capture zones of the wells, establishment of the cones of depression by field measurements, and presentation of monitoring data from adjacent and downgradient monitoring wells. Specific modifications to the system shall be proposed in the event that the system is demonstrated not to be effective in containing and cleaning up the pollutant plume.

4. Reports submitted pursuant to Specification B.2 and Provisions C.1, C.2, and C.3 of this Order shall include, but need not be limited to, the following elements:

   a. Appropriately scaled groundwater gradient contour maps.

   b. Appropriately scaled and detailed base maps to show the location of all monitoring wells and extraction wells, and identify adjacent facilities and structures.

   c. Updated cross-sections and/or fence diagrams correlating specific geological units to more precisely define the affected aquifer zones.

   d. Where appropriate, the results of capture zone modeling for extration well(s) and/or injection/recovery systems, shall be compared with field measurements to update and calibrate the model.

   e. Iso-contour maps to graphically depict the distribution of pollutants at various depths.

5. The discharger shall submit monthly progress reports to the Regional Board on status of compliance with the Prohibitions, Specifications, and Provisions of this Order. In the event of non-compliance, the discharger shall clarify the reasons for non-compliance and shall propose specific measures to be taken to achieve compliance with an implementation time schedule.

6. All samples shall be analyzed by State certified laboratories using approved EPA methods for the type of analysis to be performed. All laboratories shall maintain quality assurance/quality control records for Board review.

7. The discharger shall permit the Board or its authorized representative, in accordance with Section 13267(c) of the California Water Code:

   a. Entry upon premises where any pollution source exists, or may potentially exist, or in which any required records are kept;

   b. Access at reasonable times to copy any records required to be kept under terms and conditions of this Order;

   c. Inspection of any monitoring equipment or methods required by this Order.

   d. Sampling of any groundwater or soil which is accessible, or may become accessible as part of any investigation or remedial action program, to the discharger.

8. The discharger shall file a report on any material changes in the nature, quantity, or transport of polluted groundwater associated with the pollution described in this Order.

9. The discharger shall maintain in good working order and operate, as efficiently as possible any facility or control system installed to achieve compliance with the requirements of this Order.

10. The Board will review this Order periodically and may revise the requirements when necessary.

I, Roger B. James, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on September 18, 1985.

for ROGER B. JAMES
Executive Officer